



U.S. Department  
of Transportation  
**Research and  
Special Programs  
Administration**

400 Seventh St., S.W.  
Washington, D.C. 20590

JUL 25 2003

Mr. John Rhodes  
Packaging Engineer  
Barr  
P. O. Box 1879  
Memphis, TN 38113-38101

Ref. No.: 03-0082

Dear Mr. Rhodes:

This responds to your letter regarding the requirements for shipping a product called WOOD BLEACH in accordance with the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180), by highway and vessel.

The product is a two-part kit consisting of one inner container of "Sodium Hydroxide Solution, 8, UN 1824, PG II" and one inner container of "Hydrogen Peroxide, aqueous solution, 5.1, UN 2014, PG II," with a Class 8 subsidiary hazard. The products are packaged in plastic bottles inside of a fiberboard box. There are four of these kits overpacked into a UN 4G fiberboard box. The overpack is properly marked and labeled. Specifically, you asked how to ship these products by highway and vessel, and why "§173.266, packaging requirements for hydrogen peroxide solution in water," and "3.6 of Annex I" of the International Maritime Dangerous Goods (IMDG) Code, no longer exist.

In a final rule published in the Federal Register on December 21, 1990, the HMR were aligned with international standards based on the U. N. Recommendations. Performance-oriented packaging requirements were adopted which made certain sections of the regulations, (e.g., §173.266) obsolete. The IMDG Code is revised every two years, and the 2002 Edition is the current standard for shipping hazardous materials by vessel.

As previously stated in our responses to your company (September 28, 1992 and November 8, 1995), you may package these materials together in the same outside package unless mixing the materials is likely to cause a dangerous evolution of heat, or flammable or poisonous gases or vapors, or to produce corrosive materials (see §173.21(e)). The IMDG Code includes a corresponding provision (see IMDG Code, General Provisions, 1.1.4) that prohibits from transportation by vessel materials or articles that are liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive, or flammable gases or vapors under conditions normally encountered during transportation. Each material within the package must be described on the shipping paper and marked on the outside package. The package must be labeled with a Division 5.1 (oxidizer)



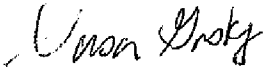
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173.266

label and a Class 8 (corrosive) label for the primary hazards of the materials. The overpack must be marked with the proper shipping name and identification number and labeled for each hazardous material in the package unless markings and labels are visible (see §173.25). The package may be stowed with other materials in accordance with §177.848(e)(6).

I hope this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,

A handwritten signature in cursive script, appearing to read "Susan Gorsky".

Susan Gorsky  
Senior Transportation Regulations Specialist  
Office of Hazardous Materials Standards



Engrum  
§172-101(s)  
Applicability  
08-0082

March 11, 2003

Hattie L. Mitchell, Chief  
Research and Special Programs Administration  
Office of Hazardous Materials Safety  
400 Seventh Street, S. W.  
Washington, D. C. 20590

Dear Ms Mitchell:

Your office has addressed this subject before on a number of occasions. However, a number of years have past and regulations change. The concern is the shipment of our product called WOOD BLEACH via highway and vessel. This is a two part kit consisting of one inner container of a "Sodium Hydroxide Solution, 8, UN1824, PGII" and one inner container of "Hydrogen Peroxide, aqueous solution, 5.1, UN2014, PGII". These are plastic bottles packed into a fiberboard carton. There are four of these kits packed into a corrugate overpack. The over pack is properly marked and labeled and has been performance tested and carries a 4G rating.

There at one time existed, in 49 CFR, a section that addressed this issue, 173.266. It no longer exists. A copy, of a section, is attached to this letter. My question is why does it no longer exist. Now, since the IMDG has changed the format of their regulations, I can't find the section you reference in your November 8, 1995 letter "3.6 of Annex I". I'm sure it exists somewhere under another section.

What I really want to know is: What do I tell our customers, that buy our product, how to ship this product by highway and vessel, and be able to give them a copy of a document that says it is safe to ship. This product is not a hazard when the two items are mixed together; it produces water and oxygen.

I look forward to your response.

Sincerely,

A handwritten signature in cursive script, appearing to read "John Rhodes".

John Rhodes, Packaging Engineer

2105 Channel/PO. Box 1879  
Memphis, TN 38113/38101  
Ph 901.775.0100

efficient closing device. A venting device which will not leak liquid under conditions normally incident to transportation is permitted.

(7) [Reserved]

(8) Spec. 12B (§ 173.205 of this subchapter). Fiberboard boxes with inside polyethylene bottles not over 1 gallon capacity each with vented closures; such bottles over 32 ounces capacity each must be completely contained in a securely closed polyethylene bag or tube constructed of material having minimum film thickness of 0.003 inch. Alkaline solutions containing sodium hydroxide or other alkaline materials packed in glass or polyethylene bottles not over 1 gallon capacity each and with hydrogen peroxide solution contained in polyethylene bottles not over 1 gallon capacity each, when shipped as a wood bleach preparation, may be packed together in inside chipboard or corrugated fiberboard boxes or separated by corrugated fiberboard partitions; not more than six inside chipboard or corrugated fiberboard boxes having inside bottles not over 32 ounces each, or more than 4 one gallon bottles separated by corrugated fiberboard partitions may be packed in one outside box; completed package with mixed contents must be capable of withstanding a drop from a height of four feet onto solid concrete without failure of any inside container.

(9) Spec. 12A (§ 173.210 of this subchapter). Fiberboard boxes with inside glass or polyethylene bottles, not over 1-gallon capacity each. Each bottle closure must be vented and each bottle completely contained in a securely closed polyethylene bag or tube constructed of material having minimum film thickness of 0.003 inch. Shipper must have established that completed package meets test requirements prescribed by § 173.210-10 of this subchapter.

(10) Spec. 16D (§ 173.187 of this subchapter). Wirebound wooden overwrap, with inside Spec. 2T or 2TL (§§ 173.21 or 173.27 of this subchapter) polyethylene container.

(d) Hydrogen peroxide solution in water containing over 8 percent hydrogen peroxide by weight and not exceeding 10 percent must be packaged as prescribed in paragraph (a), (b), (c)

or (f) of this section (vented packagings are not permitted aboard aircraft).

(e) Except for transportation by vessel, hydrogen peroxide solution in water not exceeding 52 percent hydrogen peroxide by weight, when shipped in tank cars, cargo tanks, or portable tanks in carload or truckload quantities only, is not subject to any other requirement of Parts 170-189 and 397 of this title.

(f) Hydrogen peroxide solution in water exceeding 52 percent hydrogen peroxide by weight may also be packed in specification containers as follows:

(1) Specification 103A-ALW, 103CW, 111A60ALW2 or 111A60W7 (§ 173.200, 179.201 of this subchapter). Tank cars. The 103CW and 111A60W7 tank cars must be fabricated of Type 304L, 316, or 316L stainless steel. (See §§ 173.31(a)(4) and 179.3(a) for additional requirements).

(i) Each tank car must be marked "HYDROGEN PEROXIDE" in accordance with the requirements of § 172.330 of this subchapter.

(2) Specification MC 310, MC 311, MC 312 or DOT 412 (§§ 173.345, 178.348 of this subchapter) cargo tank motor vehicle, subject to the following conditions:

(i) The tank is fabricated—

(A) From aluminum meeting the requirements of Aluminum Association designation 1060, 1260, 5254 or 5262 alloy, and with a minimum wall thickness of 0.500 inches; or

(B) An MC 312 cargo tank may be fabricated of Type 304L, 316 or 316L stainless steel.

(ii) The MAWP of the cargo tank is at least 40 psig.

(iii) The tank is designed and fabricated so that the internal surfaces can be effectively cleaned and passivated. All openings are located on the top of the tank.

(iv) The cargo tank has no bottom outlets.

(v) The cargo tank metal specification plate must be marked "DOT MC 310-H<sub>2</sub>O<sub>2</sub>", "DOT MC 312-AL-H<sub>2</sub>O<sub>2</sub>", "DOT MC 312-SS-H<sub>2</sub>O<sub>2</sub>", or as appropriate. In addition to the required markings prescribed in § 172.328 of this subchapter, each such cargo tank is marked in letters at least 1 inch

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high "FOR H ONLY".

(vi) The d pressure relie ained by th and approved

(49 U.S.C. 1803, App. A to Part 1)

(29 FR 18725 Dec. 28, 32 FR 5606, Apr. 5, 1967)

EDITORIAL NOTE: Portions affecting § 173.2 Sections Affected by Aids section of this volume

EFFECTIVE DATE NOTE: June 12, 1989, § 173.2

vising paragraph (f)(1), 12, 1989. At 54 FR 38

effective date was de 1990. At 54 FR 50382,

tive date was further 1990. At 55 FR 21035,

fective date was further 1, 1990. At 55 FR

7, 1990, the effective layed to December

(f)(2)(iv) immediately (f)(2)(v) was redesign

(f)(2)(vi), and paragraph revised, effective

For the convenience of sed text follows:

§ 173.266 Hydrogen peroxide

(f) \* \* \*

(2) Specification M (§ 173.343 of this subchapter)

Tanks must be fabricated from Aluminum 1260, 5254, or 5652, and

may be fabricated of Type 316 stainless steel. They

design working pressure and shall be designed

surfaces may be effectively cleaned and passivated. All openings in

located on top of tank. Relief devices shall be provided

tection and dust cover Identification plate

marked "DOT MC 310-312-AL-H<sub>2</sub>O<sub>2</sub>" or "DOT MC 312-SS-H<sub>2</sub>O<sub>2</sub>"

as appropriate, and in tank shall be clearly marked

less than one inch high "PEROXIDE ONLY".

and pressure relief devices provided by the Bureau of approved by the Director.